DOCUMENT RESUME

ED 154 629 FL 009 475

AUTHOR Liu, Stella S. F.
TITLE Oral Language of Preschool Children: Second Level Analysis.
SPONS AGENCY Office of Education (DHEW), Washington, D.C.
PUB DATE Mar 78
NOTE 54p.; For related document, see FL 009 474; Paper presented at the annual meeting of the American Educational Research Association (Toronto, Canada, March 1978)

EDRS PRICE MF-$0.83 HC-$3.50 Plus Postage.
DESCRIPTORS Black Dialects; *Child Language; Cognitive Development; Communication Skills; Discourse Analysis; *Language Development; Language Research; Linguistic Performance; Lower Class Parents; Nominals; *Parent Education; *Parent Influence; Parent Role; *Preschool Children; Socioeconomic Background; Sociolinguistics; Speech Communication; Verbs

ABSTRACT

A study was conducted to compare the language of preschool children from low-income homes to that of their parents, as affected by the adult participation in training sessions planned to encourage language development. The study was conducted in three preschools in the Detriot metropolitan area. A total of 96 children from ages 2 1/2 to 5 participated; 56 children were randomly selected for the experimental group and 40 for the control group. Parents were placed in experimental or control groups, according to their children's assignment. The parents were given 12 training sessions on topics generally related to language and cognitive development at preschool level; they were also given tasks to carry out with their children at home. Spontaneous speech was obtained as pretest and posttest measures. The responses were analyzed on two levels. The results of the second level analysis, analysis of noun phrase and verb phrase complexity, are discussed in this paper. (CPM)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED154629

ORAL LANGUAGE OF PRESCHOOL CHILDREN:

SECOND LEVEL ANALYSIS

Stella S.F. Liu, Ph.D.

Associate Professor

Wayne State University

FL009475

Paper presented at the annual conference of the American Research Association, Toronto, Canada, March, 1978 and published in ERIC.

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

Stella Liu

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC) AND USERS OF THE ERIC SYSTEM."

Purpose of the Study

This study is part of a larger project funded by the U.S. Office of Education. The funded project aims to explore if training provided to low-income parents and tasks they carry out with their own children would effectuate better performance by the children on language and concept development in preschool, on reading readiness tasks in kindergarten and in reading in the elementary grades. Within this projected longitudinal study is a substudy of the language of these preschool children and their parents. The oral language of the children has been analyzed at two levels. The first level analysis of the children's language has been reported in a separate paper. (Liu, 1978) Results of the second level analysis are reported in this paper.

Theoretical Background

The entire corpus of child's language data was given a Second Level Analysis which was a linguistic analysis of noun phrase and verb phrase complexity primarily based on a study by Cazden (1969). The Cazden scales were attractive for many reasons: firstly, the children in the study are of preschool age as are the children in the present study. Secondly, the children in the present study, like those in Cazden's, are from a lower socioeconomic background. Finally, unlike other scales which were considered, Cazden's scales have the added advantage of being based on recent

research. If current research provides insight into the order in which various features of language are acquired, then this new knowledge should be reflected in a scale designed to measure a child's ability to use such features. Briefly, noun phrase and verb phrase constructions which are known to be acquired at an early age are scored lower than those which are known to be acquired later.

It is perhaps also important to note that only the noun phrase and verb phrase were analyzed. The other grammatical features could not be accounted for because at the present stage of our knowledge it is not known in what order all grammatical features are acquired by children.

Descriptions of the Noun Phrase Scale and the Verb Phrase Complexity Scale and findings of the analysis of data are presented in this paper.

Design of the Study

The study was conducted in three preschools in the metropolitan Detroit area: Duffield Preschool in Detroit, Wayne State University Nursery at Jeffries Homes, and the Westwood Child Development Center in Westwood, Michigan.

A total of 96* children from age 2½ to age 5 participated in the study. Fifty-six children were randomly selected for the experimental group and 40 children in the control group. Their parents were placed in experimental or control groups according to their children's assignment.

*Due to incomplete data of some children, this original number was reduced for this substudy.

Treatment of the project consisted of twelve training sessions for parents on topics generally related to language and cognitive development at preschool level. Parents were also given a number of tasks to carry out with their own children at home between January and May, 1977. Example of tasks include reading aloud to children, labelling objects, science experiments with colors and plants, and prereading visual discrimination tasks on similarities and differences. No treatment was designated for specific language development.

Independent variables include age, ethnic background, and sex of the children and parents, and levels of education and income of parents. Dependent variables include the pre and posttest results of the Test of Basic Experiences (TOBE), the Reading Readiness Test for Disadvantaged Preschool Children (PREP). The pre and post oral language analysis of the children, and the language analysis of the parents.

Methodology

Spontaneous speech was obtained from each child by presenting him/her individually with five pictures. This was done as a pretest measure in December, 1976 and as a posttest in May, 1977. The pictures were carefully selected to provide interest and a degree of puzzlement to elicit full responses from children. After some warm-up conversation to establish rapport, the interviewer followed the

interview procedures used in the Loban study (1976, pp. 133-134). All responses were tape-recorded and were transcribed later on prepared forms by persons trained by the investigator on a set of uniform procedures.

The second level analysis was performed on noun phrase and verb phrase complexity which includes an adjustment for dialect, modification introduced in this study. A discussion of the noun phrase and verb phrase complexity follows.

NOUN PHRASE COMPLEXITY

In the Cazden's noun phrase scale (NP for short), an unmodified noun was given a score of one, modified nouns were given scores from two to six. All scores for a child were totaled and then divided by the number of noun phrases which were given a score. The result was an average score for noun phrase complexity. The scores did not correlate with the number of words or morphemes in the noun phrase, although the presence of an extra word or morpheme often had the effect of raising the total score for that noun phrase. This scale takes into account only nouns, plural endings, and all modifiers which precede nouns. It does not account for phrase modifiers (a picture of the boy), verbal modifiers (a boy running down the street), relative clauses (a boy who is running down the street), or nominalized sentences (the boy's running down the street). In other words, this scale measures only pre-noun modification. Certain nouns were excluded from analysis because they required no

modification. These will be discuss-d later.

1.0 SCORING NOUN PHRASE COMPLEXITY

Points were assigned to noun phrases as follows: A single noun construction without a plural ending or any other modifiction was given a raw score of one point. If the noun phrase included either an article, a plural ending or a prenon modifier other than an article, an extra point was given for each. Double noun constructions (candy cane, ice cream, lunch box, Daddy shirt) were given only one point. Possessive pronouns counted only if the correct form was used. For example, they birthday or he ball were only given one point (see section on dialect scoring), but their shirt or his ball were given two points. A noun phrase with a possessive noun, as opposed to a pronoun, was given two extra points. If two modifiers occured together (that little boy) the phrase was given one point for each modifier and an additional point, provided that neither modifier was an article.

The scoring scale is presented below:

Score of 1 :	Unmarked Noun	(wagon, dog, bird)
	Noun + Noun	(ice cream, suitcase)
Score of 2 :	Article + Noun	(a brother, the shoe)
	Plural Noun	(worms, hats, birds)
	Modifier + Noun	(one boy, her mudder, this man)
Score of 3 :	Article + Plural Noun	(the kids, them birds)
	Modifier + Plural Noun	(her hands, blue ones)

Possessive Noun + Noun (boy's shoes)

Score of 4 : ART + MOD + PlNoun (the big ones, the other birds)

MOD + MOD + Noun (Some more ice cream, her lil' frien)

MOD + ART + PlNoun (all the papers, all the birds)

MOD + PossNoun + Noun (the boy's head)

Score of 5 : ART + MOD + MOD + Noun (the other little boy)

MOD + MOD + PlNoun (some more worms, two little ones)

PlPossNoun + Noun (babies' balls)

Score of 6 : ART + MOD + MOD + MOD + Noun (an other little bitty worm)

ART + MOD + MOD + PlNoun (the little cute ones)

ART + MOD + PossNoun + PlNoun (the other boy's friends)

Examples for the scoring scale are as follows:

Noun Phrase		Points	Explanation
	shirt	(1)	single noun
Daddy	shirt	(1)	double noun
			1 extra point for:
big	shirt	(2)	modifier
his	shirt	(2)	modifier
a	shirt	(2)	article
	shirts	(2)	plural
			2 extra points for:
a big	shirt	(3)	article, modifier

big	shirts	(3)	modifier, plural
his	shirts	(3)	modifier, plural
Addy's	shirt	(3)	possessive noun + 1
			3 extra points for:
the big	shirts	(4)	article, modifier, plural
his big	shirt	(4)	modifier, modifier + 1
big old	shirt	(4)	modifier, modifier + 1
Daddy's	shirts	(4)	possessive noun + 1, plural

1.1 Conditions for Scoring

In scoring the NP of this study, seven conditions were adhered to:

1. Nouns or Pronouns which do not require modification are not counted (children, grass, food, ice cream)
2. Nouns with negation are not counted.
3. Nouns are only counted if all modification is on the same side of a pause.
4. Nouns occuring in Noun + Prepositional Phrase constructions are counted separately (a lot of toys, a picture of the boys).
5. Both nouns in a compound construction are counted only if they receive the same score.
6. There is no penalty for errors; the noun phrase is counted as if it were correct.
7. Words in Mazes are not scored.

Many restrictions were placed on the use of this scale. Many of these restrictions were suggested by Cazden, and

others were formulated during the application of her scale in the present study.

Nouns which required no modification were excluded from the count. Demonstrative pronouns and subject and object pronouns when they occured alone, were not counted. Cazden excluded from the count all negatively modified nouns. "Because of the form of negation often used by these subjects, as in I ain't got no car, the negative element not or no often replaced any modifiers." (Cazden, p. 100).

Cazden also excluded from the count nouns which normally require no modification. "Because a count of 1 for an unmodified noun had the practical result of lowering the child's mean score, certain unmodified nouns were not counted if modification would be inappropriate". (Cazden, p. 100). In this study noun phrases as in We ate a ice cream were excluded from the count, since a ice cream is inappropriate. It is possible to modify an uncountable noun with a if a prepositional phrase is used: a piece of cake. This is a type of noun phrase which the Cazden scale is not designed to handle. It was decided to count a piece and ignore of cake. Other phrasal modifiers, such as a picture of the boy and all of the children were treated in a similar manner. A picture, the boy and the children were counted as if they had occured alone.

The restrictions on, or conditions for, scoring can be summarized as follows: Nouns or pronouns which do not

require modification were not counted. Nouns with negation were not counted. Nouns were only counted if all modification was on the same side of a pause. Nouns occuring in Noun + Prepositional phrase constructions were counted separately. Both nouns in a compound construction were counted only if they received the same score. There was no penalty for errors: the noun phrase was counted as if it were correct. And finally, words in Mazes were not scored.

1.2 Further Examples from Data on Scoring

Nouns and Noun Phrases not Scored:

and him got hurt	(see #1 above)
gonna get it	"
He can't put it away	"
They got food	"
They eat ice cream	"
Oh, Shawn has a dress	" (name)
and got hats and hair too	"
They're hauling something	"
Dem got pants too	" (no singular form)
(and uh, an uh) momma	" (name)
Dem playin house	" (name)
Dem playin school	" (name)
And garbage and paper	"
Dem eatin ice cream, cake	"
And dem drinkin milk	"

Frosty the Snowman	" (name)
Frosty 'no man	" (name)
Cause I got some at home	"
I know where they is	"
and then she got up	"
they eat ice cream	"
that eats cake	"
Somebody's left their cake	"
and the girl say mother give us some more	"
Making snow fall make snowman	"
I got one	"
He feeding dees	"
That's anoug	"
That's all	"
And a boy got one	"
Barbara do	" (name)
and they're going' to school	"
Food	"
People have ice cream	"
and there's not no more ice cream	(see #2 above)
A party nothing else	"
she no get no ice cream	"
Nothing it no microphone	"
They got a camera but no teachers	"
They two X___X	(see #3 above)
(I got some...) more clothes	"

the (umm) boy "

two other (uh) kids "

and the dog's licking his hand, paw (see #5 above)

they got boot an raincoat and a hat "

he got on pants, shirt "

and the lady, boy girl, dog and the wagon "

picking up the snakes and worms "

(dress) (see #7 above)

and den we had some milk (hot dog, yeah) "

and a hat (a hat) "

(the thing, the roll and den and den (they...) "

Score of 1:

Hat

Wagon and dog and woman

(uh) umbrella

and bird

they got typer (boom boom boom)

See camera

Snowman man birds and boy

Doggie wagon people (people) big boy

I see lot of car

Score of 2:

the case, hat boots

a suitcase

and the boot and a shoe

and got hats and hair too

socks

birds

worms

Eat that snowman

They got boots on

Picking up worms

Putting snakes on the floor

and uh sister

an a brother

and (uh) flowers

and socks and shoes

Ice cream scoop

He got this snake

Somebody's left their cake

and then they ate her ice cream

and then her mudder came

and the girl say mother give us some more

(yeah, yeah, yeah) we had some milk (hot dog, yeah)

They got their clothes and got ready for the snow (no singular)

And they got paper roll that type on

He gonna be my friend

Them are feeding food to the bird

The dog's sitting on a cat

and den he talked in the telephone

and den she got up and got da paper

and they went get wet in the snow

They fell down and the doggy and he steps his foot up

they have a wagon X___X .

yeah, a typewriter

the boy, he had a chat

and that's the bird

Dem build a snowman

and the girl said she would

rake the yard put the boy in there

They got a suitcase

the boo boo

Mother putting the bandaid on it

One boy's had a camera

One girl's readin and throwin in the garbage

Birds do

A 'nowman

He got a nose

and that girl on the floor

I play in the 'now like him

He drinking the cool aid, no milk

a baby carriage (carriage would not occur alone)

puttin that...in that paper

that color

a lunch pail

one piece of cake

(I got some) more clothes at home in my closet

(how about) crackers (crackers)

and they're playing and they're taking pictures

They're eating their cake

his father's watching them

This the boy

This the man

That the house

That the mommy

Score of 3:

He closed his eyes

and then she licked her hands

They have blue ones (yeah)

they got a suitcase and their boots

I see a little girl crying

That's a little boy

Them birds

the same dress

a sunny day

she gots a purple dress on

(you know) with the play gym

A boy has a broken leg

the kids are playing

the udder mudder came

This the shoes

Score of 4:

All the birds singing

Them pick all the papers up

(cause they) the big ones may bite you

And then her want some more food

If you pick 'em up they have real sharp teeth

And the other ones are picking up the stuff

Her lil frien don't got one

Dat other boy picked up a snake

An that one boy's got hurt on his knee

That one boy (like that) he's walking X___X

All the kids they were eatin'

The man looked at his little boy (boy)

and (she wants she wants some) she wants some more ice cream

One little girl she was mad cuz she ate up her food

And this one man he was looken

Score of 5:

A little tiny snowman

two little ones

(some) They're looking at em, these two peoples

Cause I don't got no more and these few mothers came

And the other little boy he was write

No, (I) I wike (and and but) picks little bitty times

and got up early to go pick some more worms

Three little kids, one, two, three, and...

and one of these little girls she cries

Score of 6:

Ya they had a good night's sleep

(um) the other boy's friends are pushing the things back...

The boy walked to the other boy's father

Results

2.1 Noun Phrase Index

Pretest Equivalency

In order to establish equivalency of the pretest scores of the experimental and the control groups, a t-test was performed on the noun phrase index. The results show no significant difference between the experimental and the control groups.

Pre-Post Tests Comparison

The 48 children in the experimental group had a mean of 2.092 on the pretest with a standard deviation of 0.240 and a mean of 2.126 on the posttest with a standard deviation of 0.209. The increase of 0.034 in the mean is not significant. The 28 children in the control group had a mean of 2.145 on the pretest with a standard deviation of 0.257 and a mean of 2.154 on the psottest with a standard deviation of 0.245. The increase in the mean from pre to posttest of 0.008 is also not significant. (Table 1)

Table 1

NOUN PHRASE INDEX: MEANS, STANDARD DEVIATIONS, AND MEAN DIFFERENCES OF PRE-POST TESTS BY GROUP

Group	N	Mean		Standard Deviation		Mean Diff. (Post - Pre)
		Pre	Post	Pre	Post	
EXP.	48	2.092	2.126	0.240	0.209	0.034
CONT.	28	2.145	2.154	0.257	0.245	0.008

Findings by Group and by Race

In Table 2 the experimental and control groups for all three schools were combined and examined by race. The 11 white children in the experimental group had a mean of 2.0160 on the pretest with a standard deviation of 0.284 and a mean of 2.1481 on the posttest with a standard deviation of 0.166. The increase of 0.1321 in the mean is significant at $p < .05$.

The 35 black children in the experimental group had a mean on the pretest of 2.1297 with a standard deviation of 0.216 and a mean of 2.1454 on the posttest with a standard deviation of 0.195. The increase in the mean from pre to posttest of 0.0158 is not significant.

The 12 white children in the control group had a mean of 2.1359 on the pretest with a standard deviation of 0.199 and a mean of 2.0919 on the posttest with a standard deviation of 0.295. This shows a decrease of -0.0439 which is not significant.

The 14 black children in the control group had a mean of 2.1306 for the pretest with a standard deviation of 0.313 and a mean of 2.1851 on the posttest with a standard deviation of 0.206. An increase of 0.0545 in the mean is not significant.

When both experimental and control groups were combined, the 23 white children had a mean of 2.0785 for the pretest with a standard deviation of 0.245 and a mean of 2.1188 on the posttest with a standard deviation of 0.238. The increase of 0.0403 in the mean is not significant. The combined 49 black children had a mean of 2.1299 on the pretest with a standard deviation of 0.244 and a mean of 2.1568 on the posttest with a standard deviation of 0.197. The increase of 0.0269 in the mean is also not significant.

Table 2

NOUN PHRASE INDEX: MEANS, STANDARD DEVIATIONS AND MEAN DIFFERENCES OF PRE-POST TESTS BY GROUPS AND BY RACE

Group	Race	N	Mean		Standard Deviation		Mean Diff. (Post-Pre)
			Pre	Post	Pre	Post	
EXP	White	11	2.0160	2.1481*	0.284	0.166	0.1321
	Black	35	2.1297	2.1454	0.216	0.195	0.0158
CONT	White	12	2.1359	2.0919	0.199	0.295	-0.0439
	Black	14	2.1306	2.1851	0.313	0.206	0.0545
ALL	White	23	2.0785	2.1188	0.245	0.238	0.0403
	Black	49	2.1299	2.1568	0.244	0.197	0.0269

MEAN * Sig. at $P < .05$ for one-tailed t-test

Posttest Results

Posttest scores were examined for the experimental and the control groups by race and no significant differences were found. (Table 3) This may be interpreted to mean that the treatment given to parents did not affect black and white children differentially.

Table 3

NOUN PHRASE INDEX: MEANS AND STANDARD DEVIATIONS OF POSTTEST SCORES FOR THE EXPERIMENTAL AND CONTROL GROUPS BY RACE

	Group	N	Mean	Standard Deviation	t	P
EXP	White	12	2.173	.181	-0.68	n.s.
	Black	38	2.125	.222		
CONT	White	12	2.092	.295	1.04	n.s.
	Black	15	2.191	.200		

Conclusion and Discussion

In this research both the experimental and control group children increased their performance level on the Noun Phrase Index in the pre and posttests. The increase was greater for experimental than control group children (Table 1), but was statistically significant only for white children in the experimental group (Table 2). Among one group, scores on this measure decreased slightly. Black children in both groups showed slight increases in this measure from pre to posttest.

The experimental treatment, therefore, seemingly had a stronger impact on white children than on the black children. The reasons for this are uncertain. It is interesting to note in Table 2 that standard deviations on pre and posttest measures are dissimilar between the races in each group, but the patterns are not consistent.

These data may be interpreted that in the experimental group the white children have a lower mean than the black children on the pretest, but on the posttest the white children had a higher mean than the black children's posttest. In the control group the mean decreased from pre to posttest for the white children while it increased from pre to posttest for the black children. This would indicate that the experimental method has a slightly positive effect on the Noun Phrase Index of the white children while the black children showed a slight decrease on pre to posttest scores. These differences are not statistically significant except for white children in the experimental group. When both experimental and control groups were combined it can be seen that the black children had a higher mean on both the pre and posttest than did the white children. However, the mean difference from pre to posttest was greater for the white children than the black children.

VERB PHRASE COMPLEXITY

In evaluating the complexity and maturity of the verb phrase (VP for short), the Cazden scale attempts to measure the complexity of verb production by assigning points to every morpheme attached to the verb stem. Cazden cautions that this index does not measure development per se.

> In contrast to the noun phrase index where one pattern received a higher score because developmentally it appeared later, in the verb index only complexity is rated. The points assigned are simply the total number of elements or operations. The term "operations" refers here to the question transformation by which You do like becomes Do you like? This transformation earned an additional point (Cazden, p. 65).

This study used Cazden's scale without any significant modifications except for dialect (See Dialect Features and VP Complexity section). The procedure is also identical to Cazden's: a score of one to four was assigned to each VP, the score was totaled for each subject, and a mean score was computed for each subject. This mean score is designated the "VP Complexity Index."

1.0 Scoring Verb Phrase Complexity

Cazden's scale assigns scores of 1 to 4 to measure verb phrase complexity. Basically, one point is added to the VP Complexity score for every meaningful morpheme added to the verb stem. Possible scoring for VP's of children is indicated

in the chart below:

Score of 1:	Unmarked Verb	(I go, you put)
	Irregular Past or Past Participle	(He fell, it gone)
Score of 2:	Present Participle alone	(He going out)
	3rd person sing. pres. marker	(she cooks supper)
	Regular past	(I dropped it, I dood again)
	Aux + unmarked Verb	(I'll make it, I'm make, she's climb?
	PreVerb + Verb	(He wanna sit, I hafta get)
Score of 3:	Aux + Present Participle	(I'm getting dat)
	Aux + PreVerb + Verb	(Mommy's gonna go)
	Aux + Verb + Question	(May I have a lollipop?)
Score of 4:	Aux + PreVerb + Verb + Verb as an objective predicate	(I'm gonna let him knock this thing down)

From actual data from this study here are some examples of VP scoring:

They <u>was going</u> to school = 3 (Aux + Pres Part)

The little girl looking at them = 2 (Pres Part alone)

He was cry = 2 (Aux + Unmarked verb)

She wanted some more ice cream = 2 (Regular past)

They mother <u>told</u> them they <u>had to go</u>

<u>told</u> = 1 (Irregular past)

<u>had to go</u> = 2 (PreVerb = verb)

They has some cake = 2 (3rd per. sing. pres. marker)

Scores of 4 were very rarely assigned.

1.1 Conditions for Scoring

Under Cazden's scheme, there are six conditions for scoring; these conditions were adhered to in this study.

First, verbs without subjects (including imperatives) were not counted at all. This is mainly because children's speech is heavily loaded with imperatives, and assigning these unmarked forms a score of 1 would result in a meaninglessly low score on the VP Complexity scale.

Secondly, verbs with negation were not counted in order that a child be prevented from obtaining a high score simply by frequently responding I don't know or I can't do it.

Thirdly, a verb was not counted if a pause intervened between that verb and its subject. The reason for this condition is that pauses tend to contribute ambiguity.

A fourth condition was that the verb in each clause was counted separately. For instance, in You saw we had turkey, saw and had each received one point.

Fifth, both verbs in a compound predicate were counted only if they would receive the same score; if not, then only the verb closest to the subject was counted. Thus, for a construction like He's coming and get out, the second verb was not counted and the first verb received a score of 3. Cazden included this restriction in order to prevent any

penalty for errors. Thus, "It broked" received a score of 2. This restriction and its ramifications will be discussed in a later section.

1.2 Problems with Scoring

There was some difficulty in deciding whether certain past forms should be considered regular or irregular. It was felt that a verb like said, while orthographically an irregular form, in fact could arguably be included in the class of regular past tense formations, since phonologically speaking it forms its past by an addition of the morpheme / -ə d/ and an accompanying vowel change which may or may not be articulated in the speech of children. Hence, said was assigned to the class of regular past verbs and its occurrence was scored as 2. Had, however, was assigned a score of 1 since the deletion of the morpheme /v/ is an irregular past formation.

1.3 Copula Index

Only lexical verbs are included in Cazden's VP Complexity Index. A separate measure was used for copulas. The measure simply was the ratio of copulas used to the number of copulas required. This ratio was expressed in a percentage, thus 5 copulas present where expected and 5 copulas missing where needed would receive a copula index score of 5/10 or .50.

According to Cazden, "development of the use of the copula is of interest because it is such a definitive developmental phenomenon." However, the "missing" copula is also a prominent feature of black dialect, and Cazden refers to Loban's

finding that use of the copula proved to be twelve times as difficult for children whose parents were blacks from the rural south as it was for white children or black children whose parents were from an urban background. The missing copula, therefore, like several other possible verb constructions (see Dialect Features and VP Complexity) is both a feature of insufficiently developed children's speech and fully mature black dialect.

1.4 Dialect Features and VP Complexity

If the Cazden scale is to accurately reflect children's verbal capacity, it must be adjusted to account for dialect features of a child's language. As it stands, the Cazden scale seems to penalize children who may be speaking Black English (BE) by assigning lower scores to verb phrases that are missing an auxiliary "be", an "-ed" past tense marker, or an "-s" third person singular past tense marker. Even though such truncated verbal expressions are fully developed and correct in BE, the Cazden scale considers them to be incomplete or insufficiently developed compared to adult speech.

To illustrate how the Cazden scoring system penalizes speakers of BE, take three hypothetical phrases from the speech of a white child using Standard English verbal forms and compare the scores assigned these VP's by the Cazden scale with the scores assigned by this scale to the same three phrases "translated" into BE.

Standard English

He is talking	=3 (Aux + Pres Part)
I pushed her down	=2 (Regular past)
She goes to the store on Monday	=2 (3rd per. sing. pres. marker)

Black English

He talking	= 2 (Pres Participle alone)
I push her down	= 1 (unmarked verb)
She go to the store on Monday	= 1 (unmarked verb)

It is clear from these examples that the speaker of BE is penalized under the Cazden scale one point for each of these three VP's. Therefore, to adjust the Cazden scale for BE, one point must be added for each VP containing a deleted auxiliary "be", zero past tense marker, and zero third person singular present tense marker. This is because the child who is using BE forms is using VP's as fully developed in his dialect as the child using the Standard English equivalents.

On the other hand, in rare instances of hypercorrection, children who speak BE are unduly rewarded by the Cazden scale. Two VP features that are variably present in Be are the hypercorrect past form and the hypercorrect concord[1], as indicated by these examples:

It breaked	hypercorrect past
They has	hypercorrect concord

In Cazden's scoring system, "it breaked" would receive a score of 2 as a regular (though incorrect) past formation, and the

[1]Explanation of hypercorrection.

child would also receive a score of 2 for the (incorrect) /-s/ morpheme on "They has." But these formulations with which the child using Standard forms incorrectly attempts to approximate adult Standard verb formations are acceptable, in many cases, for speakers of BE. By crediting a child speaker of BE with extra points for these hypercorrections, the scale in effect penalizes the Standard English speaker by assigning him lower scores for equivalent VP's. Therefore, to adjust the scale for dialect, a point must be subtracted for each VP containing a hypercorrect past form or a hypercorrect concord form.

In the case of all five of these dialect features which the Cazden scale glosses over, a problem arises in differentiating what is immature child language from what is mature (i.e. fully developed) dialect forms. This is because the mature dialect forms are exactly the same as the child's immature approximations to Standard English. Both white and black children will, early in their language development, employ forms such as "he talking," "I push her" (past tense), "She take," "It breaked," and "They has." The white children, presumably surrounded by adult models speaking Standard English, will eventually drop these forms and employ the Standard English VP equivalents. The black children, conversely, if they are surrounded by adult speakers of BE, will have these forms reinforced and continue to employ them, at least some of the time. The problem, then, in evaluating a 3 - or 4-year-old child's utterance, "He talking," is in determining whether this

is dialect or child language. The problem is a difficult one because children at the ages covered in this study are only variably acquiring adult forms, and it is precisely this acquisition which this study is attempting to measure. In the absence of other information and further study, this study can make only a crude attempt to identify the nature of such VP forms.

One solution to this difficulty would be that of assuming that all black children speak black dialect and all white children speak Standard English and of evaluating their VP Complexity scores accordingly, using the adjustments for BE outlined above. However, at a stage of development when both black and white children employ VP forms identical to BE as part of their normal acquisition of adult Standard English forms, such a solution would unfairly overestimate the maturity of the speech of the black children. One source of unfairness would be such a method's failure to distinguish between forms that the black children will keep and those they will later discard (after all, not all black adults speak BE, and many black adults speak BE to different degrees).

In an interracial environment such as the ones present in the nursery schools surveyed in this study, the matter becomes even more complex due to peer influence on language. White children in a predominantly black environment will

speak some BE; black children in a mixed environment may speak much less BE than black children who have no white children as peer models.

Therefore, this study has made an attempt to differentiate between these forms as dialect and these forms as child speech using the following approach:

1) An "Unadjusted" VP Complexity score was computed for both white and black children; that is, Cazden's scoring system was used without modification to figure VP development.

2) Six VP features that are features of BE were separately counted. These six features are:

i) Missing Auxiliary "Be"

ii) Zero past tense marker

iii) Zero third person singular present marker

iv) Hypercorrected past

v) Hypercorrected concord

vi) Habitual "Be"

3) For each instance of VP i), ii), or iii), one point was added to the VP Complexity score. For each instance of iv) or v), a point was subtracted (for the reasons explained above). No adjustment of the VP Complexity score was made for the habitual "be," since this form would be scored under the Casden scale exactly the same as the Standard English equivalent would be scored:

Black English

I be typing = 3 point (Aux + Pres Part)

Standard English

I am typing

I was typing = 3 point (Aux + Pres Part)

I've been typing*

This "correction for dialect" was figured for children of both races. A "corrected VP Complexity score" was computed by dividing the total VP's into the corrected number of VP's. This score, which would obviously be higher in almost every case than the uncorrected VP Complexity score, could then be compared to it.

4) The separately counted six VP features were totaled for both races. Expressed as a percentage of all VP's employed by the child, this total yielded a rough measure of "Dialect Intensity" (DI). For example, if a child employed

i)	Missing Auxiliary "be	6
ii)	Zero past tense	2
iii)	Zero third per. sing. pres.	1
iv)	Hypercorrected past	1
v)	Hypercorrected concord	0
vi)	Habitual "be"	2

among a total of 36 VP's in his language sample, his DI score

---

*The form "I've been typing," which is the closest Standard English equivalent to the BE habitual "be", was not found in any of the data.

would be 12 divided by 36 or .333. It was expected that the black children would receive a higher DI score.

5) Additional dialect features were counted as they occurred in the language sample and totaled to provide an independent correlative measure of dialect. These additional dialect features were the use of the double negative, the use of the double subject, the zero plural marker on nouns and the zero possessive marker on nouns.

6) Also providing an independent measure of dialect use is the Copula Index, which should be lower for black children because the missing copula is a feature of BE. Of course, since the missing copula is also a feature of child language, this index is subject to the same difficulties as described above in distinguishing what is child language from what is black dialect.

In summary, it was hoped that by comparing the several scores

-unadjusted VP Complexity

-VP Complexity corrected for dialect

-Additional Dialect Features

-Copula Index

some statements could be made about the relationship between child language and BE, or at least about the deficiencies in the Cazden scale.

Results

Pretest Equivalency

In order toestablish equivalency of the pretest scores of the experimental and the control groups, t-tests were performed on verb phrase complexity index, copula index, dialect intensity score and corrected verb phrase complexity score. The results show no significant difference between the experimental and the control groups in any of these scores.

2.1 Verb Phrase Complexity Index

Findings by Group and by Race

In Table 4 the experimental and control groups for all three schools were combined and examined by race. The thirty-five black children in the experimental group had a mean of 1.7243 on the pretest and a mean of 1.8170 on the posttest. The increase of .093 in the mean from pre to post is not significant. The eleven white children had a mean of 1.8424 on the pretest and a mean of 2.1499 on the posttest. The increase of .307 in the mean from pre to post is not significant.

The fourteen black children in the control group had a mean of 1.9060 on the pretest and a mean of 1.8616 on the posttest. The decrease of -0.044 in the mean is not significant. The twelve white children had a mean of 1.8542 on

the pretest and a mean of 2.0856 on the posttest. The increase of 0.231 in the mean is significant at $p < .05$.

Table 4

MEAN VP COMPLEXITY SCORES

	Group	N	Experimental Pre	Experimental Post	Pre-to-Post Increase
EXP	BLACK	35	1.7243	1.8170	.093
	WHITE	11	1.8424	2.1499	.307
	WHITE "LEAD" OVER BLACK		.1181	.3329	.215
CONT	BLACK	14	1.9060	1.8616	-.044
	WHITE	12	1.8542	2.0856*	.231
	WHITE "LEAD OVER BLACK		-.0518	.224	.276

Posttest Results

In Table 5, the white children in the experimental group had a mean of 2.1097 on the posttest with a standard deviation of 0.452 and the black children had a mean of 1.8052 with a standard deviation of 0.262. The difference between black and white experimental group means is significant.

*Significant at $p < .05$ for one-tailed T-test

The white children in the control group had a mean of 2.0856 with a standard deviation of 0.407 and the black children had a mean of 1.8418 with a standard deviation of 0.308. The difference between black and white control group mean is not significant.

TABLE 5

VERB PHRASE COMPLEXITY INDEX: MEANS AND STANDARD DEVIATIONS OF POSTTEST SCORES FOR THE EXPERIMENTAL AND CONTROL GROUPS BY RACE

	Group	n	Mean	Standard Deviation	t	p
EXP	White	12	2.1097	0.452	-2.22	0.045*
	Black	38	1.8052	0.262		
CONT	White	12	2.0856	0.407	-1.77	0.088
	Black	15	1.8418	0.308		

Conclusions and Discussions

As is consistent with the patterns shown on the noun phrase complexity index, white children showed greater increase in VP complex scores than did black children. However, this increase was statistically significant at $p > .05$ only in the experimental group. This influence was strong enough so that the white/black posttest scores for both

*Significant at $p > .05$, two-tailed test

groups were significantly different (Table 5). Black children in the control group showed a slight, non-significant decline on this measure. Thus, for both races the trend in the experimental group was toward better performance.

(1) Higher Posttest Scores for Most Groups

In Cazden's study, the mean VP Complexity scores increased from 1.48 on pretest to 1.53 on posttest (Cazden, 1969). In this study, scores were much higher because the children tested here were older. The increase of scores from pre to posttest (six months later) indicates that the VP Index may well measure developmental factors as well as complexity of VP formulation. The increase from pre to posttest for all groups was from a mean of 1.784 to a mean of 1.914. However, note that the black control group did show a decrease in VP score from the pre to the posttest, suggesting the experimental procedures did have some impact on black children. Those in the experimental group not only avoided this decline but showed a slight increase.

(2) Greater Increases for the Experimental Groups

For both blacks and whites, the increases from pretest to posttest were slightly greater for the experimental groups than for the control groups. Though these increases are too small to be statistically significant, they do indicate a trend in the expected direction, as those groups with instruc-

tion in language development seemed to progress somewhat faster in their complexity of VP formulation than the control groups. If the control groups' increase can be attributed entirely to developmental factors associated with a six-month age increase, then the "extra" increase exhibited by the experimental group may be attributed to the special instruction of the language development program, which seemed to add about an .10 increment to the mean scores for verbs.

(3) Higher Scores for Most White Groups

In every instance except the pretest control situation, scores for the white children were somewhat higher than scores for the black children. The differences at pretest were quite small, and the differences at posttest, still small, but approaching significance. This difference can be interpreted in two ways: either the white children initially were more given to complex verb formulation, for whatever reasons, or the Cazden scale incorrectly penalizes black children for their greater use of dialect, as hypothesized in the section on Dialect Features and VP Complexity. Several environmental factors could contribute to the first interpretation: the white children may have been from a higher SES, may have received more language instruction prior to the survey, or may have more models who used complex verb formulations. Although all of these explanations are fathomable, one

strongly suspects, even though the differences between the two races are not huge, that at least part of these differences can be attributed to the use of dialect verb forms by black children and their resultant penalization according to the Cazden scale (see Corrected VP Complexity, for further discussion).

(4) Greater Pre-toPost Increases for White Groups

In both the experimental and control groups, the increase from pre to posttest was around .24 higher for the white children than the black. In other words, the gap between white and black (or what is indicated in the table as the white "lead" over the black children) widened over the six month period. For the combined experimental and control groups, the white mean at pretest was .072 higher than the black mean, but .286 higher at posttest. Again, two interpretations of this data are possible (and may both apply): (a) that the white children were "ahead" developmentally to begin with and that this lead increased over the six month period entirely due to environmental factors, (b) that the differences were due to penalization of dialect features by the scale and that such penalization increased. An increase in penalization may indicate that, as they grew older, white children abandoned many of the VP features discussed in Dialect Features and VP Complexity, such as the missing auxiliary "be" and the zero 3rd-person-singular-present-tense marker, as part of their process of successive approximations

to adult Standard English speech, whereas over the same period the black children retained these features since they were "correct" in their dialect. The latter interpretation is consonant with other data to be presented below.

Another possible interpretation of the differences between the black children and the white children on the VP Complexity scores, and indeed on all measures in this study, is one which cannot be glossed over: that the black children may be performing in a "sub-standard" way, that is, not up to their competence, in an experimental situation because such a situation is in a "school" environment. Labov has demonstrated, in "The Logic of non-Standard English" that lower class black children who may be verbally adept among their peers adopt an unresponsive, monosyllabic posture in school situations. This may result in lower scores on all kinds of language scales, including this one.

2.2 Copula Index

Findings by Group and by Race

In Table 6 the experimental and control groups were examined by race. The thirty-five black children in the experimental group had a mean of 0.6766 on the pretest and a mean of 0.7382 on the posttest. The increase of .062 in the mean from pre to post is not significant. The eleven white children in the experimental group had a mean of

0.7924 on the pretest and a mean of 0.7760 on the posttest. A decrease of -.016 in the mean is not significant.

The fourteen black children in the control group had a mean of 0.7134 on the pretest and a mean of 0.8076 on the posttest. The increase of 0.094 in the mean is not significant. The twelve white children had a mean of 0.8453 on the pretest and a mean of 0.8529 on the posttest. The increase of 0.008 in the mean is also not significant.

TABLE 6

MEAN COPULA INDEX SCORES

	Group	N	Pre	Post	Increase
EXP	BLACK	35	0.6766	0.7382	.062
	WHITE	11	.7924	.7760	-.016
	WHITE "LEAD" OVER BLACK		.1158	.0378	-.078
CONT	BLACK	14	0.7134	.8076	.094
	WHITE	12	.8453	.8529	.008
	WHITE "LEAD" OVER BLACK		.1319	.0453	-.087

Posttest Results

In Table 7, the twelve white children in the experimental group had a mean of 0.7530 and a standard deviation

of 0.352. The thirty-eight black children had a mean of 0.7461 with a standard deviation of 0.293. The difference between black and white experimental group means is not significant. The twelve white children in the control group had a mean of 0.8529 with a standard deviation of 0.287. The fifteen black children had a mean of 0.8093 and a standard deviation of 0.315. The difference between black and white control group mean is not significant.

TABLE 7

COPULA INDEX: MEANS AND STANDARD DEVIATIONS OF POSTTEST SCORES FOR THE EXPERIMENTAL AND CONTROL GROUPS BY RACE

	Group	N	Mean	Standard Deviation	t	p
EXP	White	12	0.7530	0.352	-0.07	0.946
	Black	38	0.7461	0.293		
CONT	White	12	0.8529	0.287	-0.37	0.713
	Black	15	0.8093	0.315		

Conclusions and Discussions

No really significant findings emerged from analysis of the mean copula index scores for all eight groups (Table 6), although several trends can be noted.

First, there were slightly higher scores for all white groups, both the pre and posttest white children used copulas

around 82% of the time, whereas the mean for black children rose from 68% on the pretest to 75.8 on the posttest, which indicates an expected greater use of the copula for white children (expected because the missing copula is a feature of black dialect).

Secondly, the differences between pre and posttest scores showed a general, though slight, increase. Several things about this increase are noteworthy. First of all, the increase was slightly greater for the control groups than the experimental groups. This difference is puzzling, because it is the reverse of what occurred for VP Complexity. Increasing use of the copula definitely points to increasing language development, according to Cazden, and in this situation the group without instruction in language development showed no less, and in fact slightly more, of an increase in copula use. Furthermore, the pre to posttest increase was completely confined to the black children. The white children, who began with significantly higher use of the copula than their black peers, ended up six months later with practically identical scores on copula use while black children's use of the copula increased. In other words, the gap between white and black narrowed here as the white children's "lead" over the black children decreased by about eight percentage points. This is the reverse of what occurred for VP Complexity, and what could be expected to occur if copula use were a dialect feature. One may speculate that the develop-

ment of the copula has a distinctly different pattern from the development of the other verb phrases. Both features may follow broadly similar patterns but over different age spans. Since the age spans in this sample were fairly large, it is difficult to pinpoint and explain the varying development for both races.

Part of the reason for the difficulty in interpreting these results may be due to the by-now obvious difference between experimental and control groups. For whatever reason, the control groups scored higher on the pretest than the experimental groups, indicating that the samples seemed to be somehow different (many more higher scorers in the control group). Both groups were in classrooms of teachers who had training in language skills, and the only difference in the experimental and control groups was in degree of parental involvement. In this instance, the change on this measure may have been influenced more by the teacher than by the parents.

2.3 Dialect Intensity

Findings by Group and by Race

In Table 8 the experimental and control groups were combined and examined by race. The thirty-eight black children in the experimental group had a mean of 0.3389 on the pretest and a mean of 0.4412 on the posttest. The increase in the mean of 0.102 is not significant. The

twelve white children had a mean of 0.2792 and a mean of 0.1077 on the posttest. A decrease of -0.172 in the mean is significant at $p < .05$.

The fifteen black children in the control group had a mean of 0.2556 on the pretest and a mean of 0.3660 on the posttest. The increase in the mean of 0.111 is not significant. The twelve white children had a mean of 0.1273 on the pretest and a mean of 0.1626 on the posttest. The increase of 0.035 in the mean is not significant.

Table 8

MEAN DIALECT INTENSITY SCORES

Group		N	Pre	Post	Increase
EXP	Black	38	.3389	.4412	.102
	White	12	.2792	.1077*	-.172
	Black "Lead" over White		.0597	.3335	.274
CONT	Black	15	.2556	.3660	.111
	White	12	.1273	.1626	.035
	Black "Lead" over White		.1283	.2034	.075

*significant at $p < .05$ for one-tailed t-test for whites.

Posttest Results

In Table 9, the twelve white children in the experimental group had a mean of 0.1404 and a standard deviation

of 0.168. The thirty-eight black children had a mean of 0.4279 and a standard deviation of 0.213. The difference between black and white experimental group means is significant at $p < .001$.

The twelve white children in the control group had a mean of 0.1626 and a standard deviation of 0.239. The fifteen black children had a mean of 0.3503 with a standard deviation of 0.265. The difference between black and white control group mean is not significant.

Table 9

DIALECT INTENSITY: MEANS AND STANDARD DEVIATIONS OF POSTTEST SCORES FOR THE EXPERIMENTAL AND CONTROL GROUPS BY RACE

Group		N	Mean	Standard Deviation	t	p
EXP	White	12	0.1404	0.168	4.27	0.000*
	Black	38	0.4279	0.213		
CONT	White	12	0.1626	0.239	1.91	0.068
	Black	15	0.3503	0.265		

*significant at $p < .001$, two-tailed

Conclusions and Discussions

As expected, the dialect intensity score was greater for all the black groups than the white groups, and this difference was in most cases quite high and significant (Tables 8-9). This provides independent corroboration for

Conclusions and Discussions

As expected, the dialect intensity score was greater for all the black groups than the white groups, and this difference was in most cases quite high and significant (Table 8-9). This provides independent corroboration for the interpretation advanced earlier that the differences in scores for blacks and whites on the VP Complexity Index results from penalization of the black group for dialect features on the Cazden scale. This is so because the dialect intensity scores indicate that blacks used about twice as many "dialect" verb phrases. The vast majority (probably about 90 percent) of these dialect verb phrases fell in categories 1 through 3, that is, in those categories which the Cazden scale penalizes, and only a few of these features were hypercorrections or the use of the "habitual be," which the Cazden scale rewards and ignores, respectively.

Pre to posttest differences in dialect intensity were quite interesting. Dialect intensity increased for both black groups. For the white control group, there was a slight increase in dialect intensity, and for the white experimental group, a significant decrease. Overall, white children's DI score lowered from .200 on the pretest to .136 on the posttest. The decrease for the one white group is the only result out of the four that was expected. If white children are increasingly abandoning those VP forms that are

both black dialect and child language, their Dialect Intensity score should get lower. For blacks, one would not expect such a decrease, but a significant increase could hardly be expected either, unless one assumes black children will employ more dialect as they get older. The experimental procedures designed to increase parents' skills in preschool learning may have enhanced verbal, exchanges between parent and child and thus may have produced more conformity to the parents' speech patterns by children of both races.

The two control groups, which started out lower on dialect intensity, increased more on DI than the experimental groups. If the instruction that was given to the experimental group pointed in some way toward the reduction of non-standard forms, then this result can be explained by that instruction.

The net result of the differences in pre and posttest scores for both races is that the gap between the races widened. Apparently, blacks spoke more dialect on the posttest than the pretest, whites less. However, it should be remembered that this "dialect" score measures features which are as much child language as dialect. This result seems consonant with the results of the VP Complexity Index, wherein the white children seemed to learn standard forms and discard nonstandard ones while the blacks retained them. The Dialect intensity figures indicate that this black

retention of dialect forms is more like a greater use of them than a retention.

2.4 Corrected VP Complexity

The corrected VP Complexity scores assumes all dialect verb features (see section on Dialect Features and VP Complexity) are in fact dialect productions and not child language and adjusts the scores for both races accordingly.

Findings by Group and by Race

In Table 10 the thirty-eight black children in the experimental group had a mean of 1.9426 on the pretest and a mean of 2.2343 on the posttest. The increase of 0.292 in the mean is significant at $p < .01$. The twelve white children had a mean of 2.0399 on the pretest and a mean of 2.2490 on the posttest. The increase of 0.110 in the mean is not significant.

The fifteen black children in the control group had a mean of 2.1417 on the pretest and a mean of 2.2190 on the posttest. The increase of .078 in the mean is not significant. The twelve white children had a mean of 1.9835 on the pretest and a mean of 2.2286 on the posttest. The increase of 0.245 in the mean is not significant.

TABLE 10

MEAN CORRECTED VP COMPLEXITY SCORES

	Group	N	Pre	Post	Increase
EXP	BLACK	38	1.9426	2.2343**	.292
	WHITE	12	2.0399	2.2490	.110
	WHITE "LEAD" OVER BLACK		.0973	.0147	-.083
CONT	BLACK	15	2.1417	2.2190	.078
	WHITE	12	1.9835	2.2286	.245
	WHITE "LEAD" OVER BLACK		-.1582	.0096	.168

Posttest Results

In Table 11, the twelve white children in the experimental group had a mean of 2.2421 on the posttest with a standard deviation of 0.411. The thirty-eight black children had a mean of 2.2110 with a standard deviation of 0.337. The difference between black and white experimental group means is not significant.

**Significant at $P < .01$ for one-tailed t-test for blacks

TABLE 11

CORRECTED VERB PHRASE COMPLEXITY, MEANS AND STANDARD DEVIATIONS OF POSTTEST SCORES FOR THE EXPERIMENTAL AND CONTROL GROUPS BY RACE

	Group	n	Mean	Standard Deviation	t	p
EXP	White	12	2.2421	0.411	-0.26	0.792
	Black	38	2.2110	0.337		
CONT	White	12	2.2286	0.436	-0.32	0.748
	Black	15	2.1841	0.272		

Conclusions and Discussions

Table 10 should be compared to Table 4 for Verb Phrase Complexity. In making that comparison, it is obvious that the Corrected VP Complexity scores "jump" the black scores much more than they "jump" the white scores, which is predictable since the black groups score higher on dialect intensity.

The white "lead" over the black groups is much less than it is for uncorrected VP Complexity scores, and that lead is in fact non-existent in the control groups. All scores increase from the pre to the posttest, as expected. What is remarkable is that all four groups (black and white, experimental and control), which have such different scores on the pretests, end up with very similar means on the posttest.

Although there undoubtedly are dialect features of black speech which intrude into the speech of white children in mixed preschools, the corrected VP Complexity score does not give an accurate indication of white children's speech because it assumes all of the verb features in question are dialect, and not child language.

Black Corrected VP Complexity VS White VP Complexity

It is important also to compare the corrected VP scores for black children with the uncorrected VP Complexity scores for white children, as is done in Table 12.

In this table, black children are being given full credit for all dialect features and white children given no credit for any possible dialect features. In other words, the VP's in question (see section on Dialect Features and VP Complexity) are assumed to be child language in the case of the white children and dialect in the case of the black children. This is again a distortion, but it is important to present this table in conjunction with the others. That this is a distortion is evident from the fact that now blacks get higher means in all groups, although the black "lead" decreases slightly over time. It decreases more in the experimental than the control group. It should be recalled that the black and white children were taught in the same classroom, so to some degree the black children may be reinforcing black dialect spoken by white children. But these effects

would not be expected to differ in the experimental and control groups.

TABLE 12

BLACK CORRECTED VP COMPLEXITY vs.
WHITE VP COMPLEXITY SCORES

	Group	N	Pre	Post	Increase
EXP	BLACK CORRECTED	38	1.9426	2.2343	.292
	WHITE UNCORRECTED	12	1.8424	2.1499	.307
	BLACK "LEAD" OVER WHITE		.1002	.0844	-.016
CONT	BLACK CORRECTED	15	2.1417	2.2190	.078
	WHITE UNCORRECTED	12	1.8542	2.0856	.231
	BLACK "LEAD" OVER WHITE		.2875	.1334	-.154

The trends of the whites "catching up" in this comparative table should continue over time until eventually the black corrected score is virtually identical to the white uncorrected score. Whites lose their features which are to them child language and adopt Standard English. Blacks who continue to speak Black dialect retain those same features.

It would be instructive to see how these scores compare as the children age. Of course, these statements are over-simplifications. The truth lies somewhere among the various tables, all of which distort somewhat the true picture because we have not yet found a way to distinguish between what is dialect and what is child language when in fact at this stage they are identical. This study indicates that such differences are important and clearly justify future research, but further modification of measurement instruments and experimental procedures is called for. Such refinement is, of course, difficult in any field experiment which involves the cooperation of many different groups and the consideration of many different sets of values.